

## CLAIM AMENDMENTS:

1-22 cancelled

23. (new) A valve, the valve comprising:

a valve closing member; and  
a valve seat having a bore hole for a medium to be controlled, a surface of said valve seat having a plurality of concentrically extending channels and elevated structures disposed between said channels, wherein a roughness of said valve seat surface, defined by said channels and said elevated structures, is larger than a roughness of a surface of said valve closing member, wherein peaks of said elevated structures are elastically deformed when the valve is closed to define a plurality of concentrically extending sealing surfaces.

24. (new) The valve of claim 23, wherein said roughness of said valve seat surface is  $<8 \mu\text{m}$ .

25. (new) The valve of claim 23, wherein said roughness of said valve seat surface is approximately  $1 \mu\text{m}$ .

26. (new) The valve of claim 23, wherein said valve seat surface has a tapered, conical form.

27. (new) The valve of the claim 23, wherein said channels and said elevated structures on said valve seat surface are produced by honing without advance parallel to said valve seat surface.

28. (new) The valve of claim 23, wherein, during honing, a surface of a honing tool covers an entire portion of said valve seat surface coming in contact with said valve closing member when the valve is closed.
29. (new) The valve of claim 23, wherein said valve-closing member is a ball.
30. (new) The valve of claim 23, wherein said valve closing member has a flat sealing surface.
31. (new) The valve of claim 26, wherein a precision of roundness of said elevated structures and of said channels (6) is  $\leq 2.0 \mu\text{m}$ .
32. (new) The valve of claim 30, wherein a tolerance in a precision of flatness of said elevated structures is  $<4 \mu\text{m}$ .
33. (new) A method for production of a valve seat having a valve seating surface which cooperates with a valve closing member, the method comprising the step of:

finishing the surface with a honing process using a tool having a tool head cooperating with the valve seating surface, the tool being driven to rotate and produce concentrically extending working channels on the valve seating surface by means of cutting grit disposed on the tool head, wherein an amount by which the cutting grit protrudes from a surface of the tool head is defined to produce the

working channels on the valve seating surface, the working channels having a depth which is sufficiently large to permit elastic deformation of elevated structures disposed between the channels in response to seating of a valve closing member on the valve seating surface, thereby forming a plurality of narrow, concentric sealing surfaces.

34. (new) The method of claim 33, wherein the valve seat has a nominal conical shape initially effected in pre-finish processing steps and, in a finishing step, the valve seat is conically shaped a honing process, the honing process being carried out using a tool having a tool head filling a conical shape, and with means for introducing cooling and lubricating materials, the tool being driven to rotate and, by means of cutting grit located on the tool head, produce processing channels which are disposed concentrically about the conical shape on the valve seating surface, wherein a protrusion of grains on the tool head is dimensioned in such a fashion that a peak to valley depth of the channels is sufficiently large to permit elastic deformation of elevated structures between the channels to compensate for tolerances in roundness.
35. (new) The method of claim 33, wherein the honing is carried out in at least two sequential operations.
36. (new) The method of claim 35, wherein, in each honing operation, a roughness profile of a previous honing operation is abrasively removed using a tool having finer cutting grit.

37. (new) The method of claim 33, wherein the tool is periodically removed from working engagement and a processing location is subjected to flow of a cooling and lubricating medium.
38. (new) The method of claim 33, wherein during honing, the tool rotates at a rate of 250 to 6000 revolutions per minute.
39. (new) The method of claim 33, wherein, subsequent to honing, a grit removal process is carried out or a grit removal process is carried out using diamond tipped tools and/or brushes having cutting grit.
40. (new) The method of claim 33, wherein, during finishing, an axial amount of material on the valve seat of approximately 20  $\mu\text{m}$  to 90  $\mu\text{m}$  is removed.
41. (new) The method of claim 33, wherein the tool is deflected during the honing process by means of a bending joint fashioned in its shaft to compensate for misalignment of a longitudinal axis of the valve seat.
42. (new) The method of claim 41, wherein said bending joint is effected through lubrication of a tool shaft, a deflection being effected through elastic deformation of the bending joint.
43. (new) The method of claim 33, wherein a working tool and a work piece are driven in opposite directions during honing.
44. (new) The method of claim 33, wherein a tool having a plurality of layers is utilized with which a cutting grit is ceramically bonded,

wherein the tool is dressed by a flat dressing wheel with respect to whose surface, the tool is tilted through an angle in correspondence with a desired conical shape of the work piece, wherein the tool and the dressing wheel are driven in opposite directions during dressing of the tool.